

Recombinant Rat Interleukin-6 (IL-6) - Purified

Alternate names:	B-cell stimulatory factor 2, BSF-2, CDF, CTL differentiation factor, Hybridoma growth factor, IFNB2, IL-6, Interferon beta-2
Catalog No.:	PA040
Quantity:	2 µg
Background:	IL-6 is a pleiotropic cytokine that plays an important role in host defense by regulating immune and inflammatory responses. Produced by T cells, monocytes, fibroblasts, endothelial cells and keratinocytes, IL-6 has diverse biological functions. It stimulates B-cell differentiation and antibody production, synergizes with IL-3 in megakaryocyte development and platelet production, induces expression of hepatic acute-phase proteins, and regulates bone metabolism. IL-6 signals through the IL-6 receptor system that consists of two chains, IL-6R alpha and gp130. Murine IL-6 is inactive on human cells, while both human and murine are equally active on murine cells.
Uniprot ID:	P20607
NCBI:	NP_036721
GenEID:	24498
Species:	Rat
Source:	E. coli, E.coli
Format:	State: Lyophilized (sterile filtered) purified fraction. Purity: >95% > 98% pure by SDS-PAGE and HPLC analyses. Buffer System: 10 mM Tris, pH 8.0 + 0.1% SDS Endotoxin Level: < 0.1 ng per µg (1EU/µg) Reconstitution: Restore in water to a concentration of 0.1-1.0 mg/ml. This solution can then be diluted into other aqueous buffers and stored at 2-8°C for 1 week or -20°C for future use.
Description:	Recombinant rat IL-6 is a 21.7 kDa protein containing 187 amino acid residues. AA Sequence: MFPTSQVRRG DFTEDTTHNR PVYTTSQVGG LITYVLREIF EMRKELCNGN SDCMNSDDAL SENNLKLP EIQQRNDGCFQGTG YNQEICLLKI CSGLLEFRFY LEFVKNNLQD NKKDKARVIQ SNTETLVHIF KQEIKDSYKI VLPTPTSNA LMEKLESQKE WLRTKTIQLI LKALEEFLKV TMRSTRQT Biological Activity: The ED50 as determined by the dose-dependent stimulation of the proliferation of IL-6-dependent murine 7TD1 cells is < 0.01 ng/ml. Specific Activity: > 1 x 10 ⁸ units/mg Molecular weight: 21.7 kDa
Add. Information:	Centrifuge the vial prior to opening!

Storage:

Store the lyophilized protein at -20°C.
Reconstituted rat IL-6 should be stored in working aliquots with a carrier protein at -20°C.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Yu XW, Chen Q, Kennedy RH, Liu SJ. Inhibition of sarcoplasmic reticular function by chronic interleukin-6 exposure via iNOS in adult ventricular myocytes. *J Physiol*. 2005 Jul 15;566(Pt 2):327-40. Epub 2005 Apr 21. PubMed PMID: 15845578.
2. Yu XW, Liu MY, Kennedy RH, Liu SJ. Both cGMP and peroxynitrite mediate chronic interleukin-6-induced negative inotropy in adult rat ventricular myocytes. *J Physiol*. 2005 Jul 15;566(Pt 2):341-53. Epub 2005 May 5. PubMed PMID: 15878941.
3. Bruce CR, Dyck DJ. Cytokine regulation of skeletal muscle fatty acid metabolism: effect of interleukin-6 and tumor necrosis factor-alpha. *Am J Physiol Endocrinol Metab*. 2004 Oct;287(4):E616-21. Epub 2004 May 18. PubMed PMID: 15149950.
4. Rühl A, Franzke S, Collins SM, Stremmel W. Interleukin-6 expression and regulation in rat enteric glial cells. *Am J Physiol Gastrointest Liver Physiol*. 2001 Jun;280(6):G1163-71. PubMed PMID: 11352809.
5. Iwai M Increased Secretion of Tumour Necrosis Factor and Interleukin 6 From Isolated, Perfused Liver Of Rats After Partial Hepatectomy, *Cytokine*, 2001, Volume 13, Number 1. Pp.60-64.